

CLAIM LISTING

1. (Currently Amended) A composition for delivering an agent ~~in~~ into a ~~target~~ neoplastic cell of a solid tumor expressing a neoplasm-specific antigen, comprising:
 - (a) [a] an attenuated Salmonella or Shigella microorganism that has, on its [cell] surface, at least one ~~exogenous molecule~~ antibody or fragment thereof that binds to [an] a neoplasm-specific antigen on the surface of a ~~target~~ neoplastic cell of a solid tumor; and
 - (b) an agent.
- 2.– 4. (Cancelled)
5. (Previously Presented) The composition of ~~claim 4~~ claim 1, wherein the Salmonella is Salmonella typhimurium VNP20009 or Salmonella typhimurium SL7207.
6. (Currently Amended) The composition of claim 1, wherein the ~~microorganism~~ Salmonella or Shigella expresses the ~~exogenous molecule~~ antibody or fragment thereof.
7. (Currently Amended) The composition of claim 6, wherein the ~~microorganism~~ Salmonella or Shigella transiently expresses the ~~exogenous molecule~~ antibody or fragment thereof.
8. – 10. (Cancelled)
11. (Previously Presented) The composition of ~~claim 10~~ claim 1, wherein the antibody is a mammalian antibody.
12. (Original) The composition of claim 11, wherein the antibody is a human antibody.
13. (Previously Presented) The composition of ~~claim 10~~ claim 1, wherein the antibody is a chimeric antibody.
14. (Original) The composition of claim 13, wherein the chimeric antibody is a humanized antibody.

15. (Previously Presented) The composition of ~~claim 10~~ claim 1, wherein the antibody is a single-chain antibody.
16. – 17 (Cancelled)
18. (Previously Presented) The composition of ~~claim 17~~ claim 1, wherein the solid-tumor [cell] is a colon-tumor [cell].
19. (Previously Presented) The composition of ~~claim 16~~ claim 1, wherein the neoplastic cell is a carcinoembryonic-antigen (CEA)-expressing cell.
20. (Previously Presented) The composition of ~~claim 19~~ claim 1, wherein the ~~CEA-expressing~~ neoplastic cell is selected from the group consisting of a bowel cancer cell, a breast cancer cell, a cervical cancer cell, a colon cancer cell, an esophageal cancer cell, a head cancer cell, a liver cancer cell, a lung cancer cell, a neck cancer cell, an ovarian cancer cell, a pancreatic cancer cell, and a stomach cancer cell.
21. (Previously Presented) The composition of ~~claim 20~~ claim 19, wherein the CEA-expressing cell is a colon cancer cell.
22. (Cancelled)
23. (Previously Presented) The composition of ~~claim 16~~ claim 1, wherein the antigen is selected from the group consisting of CAK1, CDK4, CDR2, carcinoembryonic antigen (CEA), disialoganglioside GD2, HER-2, large external antigen (LEA), MAGEs, MUC1, p21, podocalyxin, Ras, UK114, and WT1.
24. (Original) The composition of claim 23, wherein the antigen is a CEA.
25. (Original) The composition of claim 1, wherein the agent is selected from the group consisting of a diagnostic agent, a labeling agent, a preventive agent, and a therapeutic agent.
26. (Currently Amended) The composition of ~~claim 25~~ claim 1, wherein the ~~therapeutic agent is selected from the group consisting of~~ comprises an anti-tumor compound, a lipid, a

~~nucleic acid, a polypeptide, a polysaccharide, and a pro-drug or a pro-drug of an anti-tumor compound.~~

27. (Currently Amended) The composition of claim 26, wherein the nucleic acid ~~is a plasmid~~ comprises a plasmid encoding a polypeptide ~~selected from the group consisting of an anti-proliferation factor, comprising an immuno-enhancing factor, a pro-apoptotic factor, and a pro-drug converting enzyme.~~

28. – 32. (Cancelled)

33. (Currently Amended) A method for treating a carcinoembryonic antigen (CEA)-expressing neoplasia in a subject in need of treatment, the method comprising:

- a) administering to the subject a therapeutic composition in an amount effective to treat the neoplasia, wherein the therapeutic composition comprises:
 - i. [a] an attenuated Salmonella or Shigella microorganism that has, on its ~~cell~~ surface, at least one ~~exogenous molecule~~ antibody or fragment thereof that binds to [an] a neoplasm-specific antigen on the surface of a neoplastic cell of a solid tumor in the subject; and
 - ii. a therapeutic agent;
- b) binding of the attenuated Salmonella or Shigella to the neoplastic cell; and
- c) infecting the neoplastic cell.

34. (Cancelled)

35. (Currently Amended) The method of ~~claim 34~~ claim 33, wherein the solid tumor ~~is a colon tumor~~ selected from the group consisting of a breast tumor, a colon tumor, a lung tumor, a pancreatic tumor, and a stomach tumor.

36. (Previously Presented) The method of ~~claim 35~~ claim 33, wherein the solid tumor expresses carcinoembryonic antigen (CEA).

37. (Currently Amended) The method of ~~claim 36~~ claim 33, wherein the solid tumor is ~~selected from the group consisting of a bowel tumor, a breast tumor, a cervical tumor, a colon tumor, an esophageal tumor, a head tumor, a liver tumor, a lung tumor, a neck tumor, an ovarian tumor, a pancreatic tumor, and a stomach tumor.~~
38. – 41. (Cancelled)
42. (Previously Presented) The method of ~~claim 41~~ claim 33, wherein the Salmonella is *Salmonella typhimurium* VNP20009 or *Salmonella typhimurium* SL7207.
43. (Currently Amended) The ~~composition~~ method of claim 33, wherein the ~~microorganism~~ Salmonella or Shigella expresses the ~~exogenous molecule~~ antibody or fragment thereof.
44. (Currently Amended) The ~~composition~~ method of claim 43, wherein the ~~microorganism~~ Salmonella or Shigella transiently expresses the ~~exogenous molecule~~ antibody or fragment thereof.
45. – 47. (Cancelled)
48. (Previously Presented) The method of ~~claim 47~~ claim 33, wherein the antibody is a mammalian antibody.
49. (Original) The method of claim 48, wherein the antibody is a human antibody.
50. (Previously Presented) The method of ~~claim 47~~ claim 33, wherein the antibody is a chimeric antibody.
51. (Original) The method of claim 50, wherein the chimeric antibody is a humanized antibody.
52. (Previously Presented) The method of ~~claim 47~~ claim 33, wherein the antibody is a single-chain antibody.
53. (Cancelled)

54. (Original) The method of claim 33, wherein the antigen is selected from the group consisting of CAK1, CDK4, CDR2, carcinoembryonic antigen (CEA), disialoganglioside GD2, HER-2, large external antigen (LEA), MAGEs, MUC1, p21, podocalyxin, Ras, UK114, and WT1.
55. (Original) The method of claim 54, wherein the antigen is a CEA.
56. (Currently Amended) The method of claim 33, wherein the therapeutic agent ~~is selected from the group consisting of~~ comprises an anti-tumor compound, a lipid, a nucleic acid, a polypeptide, a polysaccharide, and a pro-drug or a pro-drug converting enzyme of an anti-tumor compound.
57. – 59. (Cancelled)
60. (Currently Amended) The ~~composition~~ method of ~~claim 57~~ claim 56, wherein the nucleic acid comprises a plasmid encoding a polypeptide comprising an immuno-enhancing factor comprising at least one gene silencing cassette ~~plasmid is an expression plasmid.~~
61. – 64. (Cancelled)
65. (Currently Amended) A method for treating a carcinoembryonic antigen (CEA)-expressing neoplasia in a subject in need of treatment, the method comprising:
- a) administering to the subject a therapeutic composition in an amount effective to treat the neoplasia, wherein the therapeutic composition ~~consists of~~ comprises [a] an attenuated Salmonella or Shigella microorganism that has, on its ~~cell~~ surface, at least one ~~exogenous molecule~~ antibody or fragment thereof that binds to [an] a neoplasm- specific antigen on the surface of a neoplastic cell of a solid tumor in the subject;
 - b) binding of the attenuated Salmonella or Shigella to the neoplastic cell; and
 - c) infecting the neoplastic cell.

66. (New) The method of claim 33 or claim 65, wherein administering comprises dispersing the therapeutic composition to a subject via subcutaneous, intravenous, or oral delivery; or a combination thereof.